

## PROJECT DESCRIPTION

## GENERAL

THIS PROJECT INVOLVES THE CONSTRUCTION OF A TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 129 (PARK HEIGHTS AVENUE) AND BETH EL WAY IN BALTIMORE COUNTY, MARYLAND. MD 129 (PARK HEIGHTS AVENUE) IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

## INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA THREE-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE NB MD 129 (PARK HEIGHTS AVENUE) APPROACH OPERATING ALONE AND THE BETH EL WAY APPROACH OPERATING ALONE.

A FLASHING RED ARROW OPERATION WILL BE PROVIDED FOR SB MD 129 (PARK HEIGHTS AVENUE) LEFT-TURNS. THE LEFT TURN PHASING WILL OPERATE AS A LAGGING LEFT-TURN PHASE.

## CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH ONE (1) FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS, SYSTEM PACKAGE, VIDEO INTERFACE EQUIPMENT (1-4 CAMERAS), INTERSECTION MONITOR WITH BATTERY BACKUP FOR PHONE DROP AND ASSOCIATED HARNESSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

## PHONE DROP

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410) 787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER THE NEAREST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

## MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT. ADDITIONAL TRAFFIC CONTROL STANDARDS MAY BE USED AS DIRECTED BY THE ENGINEER.

STANDARD NO. MD-104.03-01 (SHOULDER WORK)

STANDARD NO. MD-104.03-03 (LEFT LANE CLOSURE)

STANDARD NO. MD-104.03-05 (RIGHT LANE CLOSURE)

## PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MS. ERIN KUHN  
ASSISTANT DISTRICT ENGINEER - TRAFFIC  
PHONE: (410) 229-2381

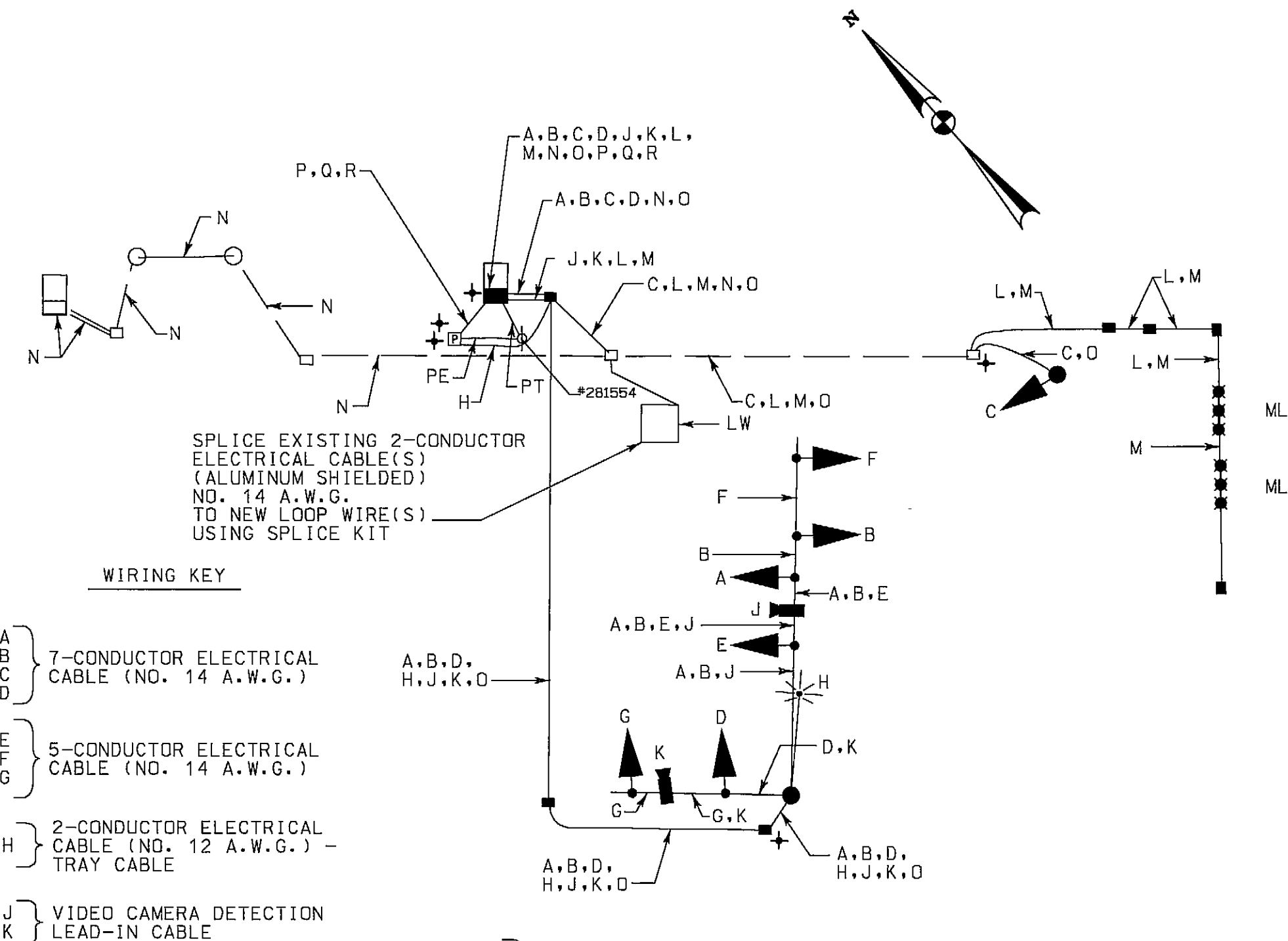
MR. ANDRE FUTRELL  
ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
PHONE: (410) 229-2361

MR. MIKE PASQUARIELLO  
DISTRICT UTILITY ENGINEER  
PHONE: (410) 229-2341

MR. ROBERT SYNDER  
ASSISTANT CHIEF, TRAFFIC OPERATIONS DIVISION  
PHONE: (410) 787-7631

MR. RICHARD L. DAFF, SR.  
CHIEF, TRAFFIC OPERATIONS DIVISION  
PHONE: (410) 787-7630

## WIRING DIAGRAM



LW - LOOP WIRE (NO. 14 A.W.G.)

ML - MICROLOOP PROBE SET

PT - PROPOSED UNDERGROUND TELEPHONE SERVICE

PE - PROPOSED UNDERGROUND ELECTRICAL SERVICE

+ - 3/4 IN. X 10 FT. GROUND ROD

## EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9000	1 EACH	QUICK CONNECT BLOCK - ("D" PANEL W/HARNESS) FOR TELEMTRY INTERFACE PANEL
9016	1 EACH	FOUR-CHANNEL, TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIER
9044	1 EACH	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED CONTROLLER WITH INTERSECTION MONITOR HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
9086	1 EACH	VIDEO INTERFACE EQUIPMENT: 1-8 CAMERAS
9571	87 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF : - 1 EACH M1-5(3) SIGN (78 IN. X 24 IN.) - MAST ARM MOUNT - 1 EACH D3-2(2) SIGN (VAR. X 36 IN.) - GROUND MOUNT - 2 EACH R3-7(2)L SIGN (30 IN. X 42 IN.) - GROUND MOUNT - 1 EACH R10-12(2) SIGN (48 IN. X 36 IN.) - MAST ARM MOUNT - 1 EACH W3-3 SIGN (36 IN. X 36 IN.) WITH "NEW" PANEL (24 IN. X 24 IN.) AND FLAG - GROUND MOUNT - 1 EACH W4-4a(1) MOD (30 IN. X 30 IN.) SIGN - MAST ARM MOUNT

## EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

ALL REMOVED SIGNAL MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR

## EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EACH	MAINTENANCE OF TRAFFIC
2002	2 C.Y.	TEST PIT EXCAVATION
5003	175 L.F.	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
5001	11 EACH	REMOVAL OF EXISTING PERMANENT PAVEMENT MARKING SYMBOLS OR LEGENDS
5004	390 L.F.	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5005	80 L.F.	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5006	60.8 SF	WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
8001	21 EACH	12 INCH LED SIGNAL HEAD SECTION
8007	1 EACH	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP & LUMINAIRE
8009	1 EACH	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8012	1 EACH	EMBEDDED METERED SERVICE PEDESTAL
8023	2 EACH	NONINVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000 FT
8024	1 EACH	REM & DISPOSE MAT & EQUIP PER ASSIGN
8027	1 EACH	TWIN MAST ARM POLE & 50 FT/70 FT MAST ARMS ANY 'T' DIMENSION
8028	2 EACH	VIDEO DETECTION CAMERA & CABLE UP TO 500 FT
8029	5 L.F.	1 INCH DETECTOR SLEEVE GALVANIZED OR FLEXIBLE LIQUID TIGHT
8030	460 L.F.	12 - PAIR COMMUNICATION CABLE, SELF-SUPPORTING OR JELLY FILLED
8034	190 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - BORED
8036	475 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED
8037	80 L.F.	WOOD SIGN SUPPORTS UP TO 4 X 6
8038	87 S.F.	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8040	315 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8041	2 EACH	WEATHER HEAD, UP TO 3 INCH
8043	150 L.F.	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG - THHN/THWN
8044	7 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8049	1 EACH	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8053	55 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8054	940 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8055	230 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TC
8056	125 L.F.	LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
8057	60 L.F.	SAW CUT FOR SIGNAL (LOOP DETECTOR)
8061	1 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT

## PHASE CHART

	1	2	3	4	5	6	7
	(R)	(R)	(R)	(R)	(R)	(R)	(R)
	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)
	(G)	(G)	(G)	(G)	(G)	(G)	(G)
PHASE 1	G	G	←FL/R-	←FL/R-	←FL/R-	R	R
1 CHANGE	Y	Y	←R-	←R-	←R-	R	R
PHASE 2 (LAG)	R	R	←G-	←G-	←G-	R	R
2 CHANGE	R	R	←Y-	←Y-	←Y-	R	R
PHASE 4	R	R	←R-	←R-	←R-	G	G
4 CHANGE	R	R	←R-	←R-	←R-	Y	Y
FLASHING OPERATION	FL/Y	FL/Y	←FL/R-	←FL/R-	←FL/R-	FL/R	FL/R



WHITMAN, REQUARDT  
& ASSOCIATES, LLP  
801 South Caroline Street, Baltimore, Maryland 21231



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STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
MD 129 (PARK HEIGHTS AVENUE)  
AT BETH EL WAY

## GENERAL INFORMATION SHEET

SCALE NONE ADVERTISED DATE July 9, 2010 CONTRACT NO. XX3535168

DESIGNED BY B. DONOWAY COUNTY Baltimore

DRAWN BY B. DONOWAY LOGMILE

CHECKED BY N. Leary TMS NO.

F.A.P.NO. TOD NO.

TS NO. DRAWING TSP-3 OF 3 SHEET NO. 3 OF 3